

## WRITING A ONE-PAGER FOR YOUR RESEARCH PROGRAM

### Example

Recurrent Airway Obstruction (RAO) is a progressive, debilitating respiratory disease, occurring in 50% of mature horses, with 5% affected severely enough to result in an end to their working careers or to euthanasia. It is a chronic, recurrent condition with clinical characteristics that are well recognized, although its pathogenesis is complex, multifactorial, and currently not well understood. As an indication of industry concern, in June of 2000, 30 of the world's leading investigators were joined by pharmaceutical companies at a national conference devoted entirely to improving RAO prevention and management. Current management and therapeutic regimens for horses with chronic or severe disease are either not efficacious or are not able to be implemented. Strategies to remove environmental precipitators such as dust and mold often fail as many horse owners are unable or unwilling to comply with such recommendations. Clearly, current research shows a need for more effective RAO treatment modalities.

With this study, we propose to administer intravenous magnesium to horses with acute and chronic RAO to determine if this treatment improves respiratory function and/or reduces arterial hypertension, without the deleterious side effects of other commonly administered drugs. Recent case reports show magnesium to be efficacious for acute human asthmatics who fail to respond to more conventional therapy. As RAO is increasingly seen as an equine analog to asthma in humans (replacing the previous use of the COPD model), and severely affected RAO horses demonstrate many of the same clinical signs as human asthmatics, RAO horses could be equally responsive to this treatment.

The specific goals of this project are to:

1. Identify the cellular mechanism for acute changes in lung function in response to a range of intravenous magnesium doses
2. Monitor long-term changes in lung physiology and anatomy in response to chronic administration of intravenous magnesium
3. Identify long-term side-effects of intravenous magnesium in horses with acute and chronic RAO

Should the research hypothesis be supported, clinicians will have another viable treatment modality at their disposal, one that is inexpensive, and effective in treating a resistant disease without the damaging side effects of other modalities. Additionally, horse owners and breeders could reduce the significant financial losses caused by the malady, currently estimated at more than \$1.5 billion annually in the U.S. alone.

### Template

One sentence: Get the reviewers attention with a specific situation and its current impact or significance

One or two sentences: Identify the importance and address the need and why it is such a problem or question

One or two sentences: Summarize the state of the art and its limitations; may include an example

One sentence: Describe the challenges to solving the problem and the gaps that remain in the field

Two or three sentences: Introduce your concept and establish its credibility; why is it novel? Ensure reviewers that it is feasible.

One or two sentences: Describe your project's fundamental rationale and/or hypothesis. Why are you the one who can do this?

List 2-4 specific objectives of your proposal.

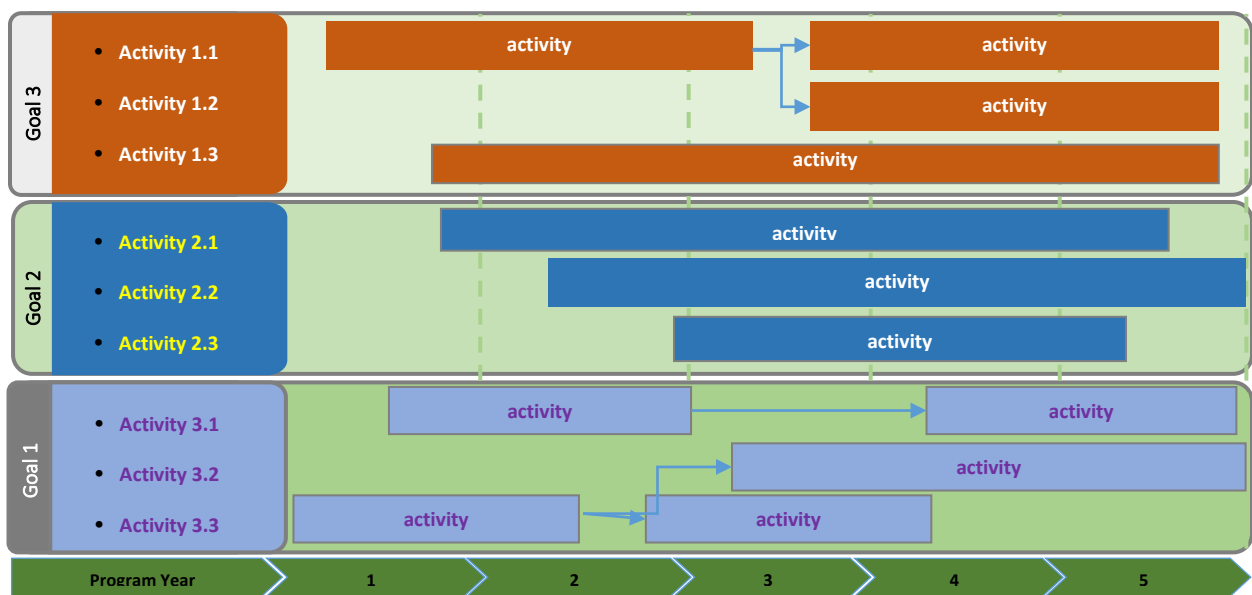
- These are NOT methods, rather they are more general aims of the research
- They should be linked to the overall hypothesis, or individual hypotheses to be tested
- They should be related, but not interdependent

One sentence: Show how your work will advance the field.

One sentence: Envision the world with the originally stated problem solved.

## Next steps for developing your proposal: develop a timeline, budget, and list of resources needed:

1. How long will the project take? (e.g. 18 months, 5 years)
2. For each of your goals listed above, what are the action items and main activities?
3. What are the resources needed to complete those activities? Which are already available?
  - a. Personnel
  - b. Materials and supplies
  - c. Travel
  - d. Equipment
  - e. Other costs
4. How will you know that you have been successful with each goal? What are the final deliverables?
5. Fill in a timeline so that you can see how the resources should be distributed into a budget over time.



## Write your project description:

Finally, turn your one-pager into a complete project description. Keep the one-pager as your introduction, then add the following sections:

### First Page

Lay out the Problem

Background

Significance

State the Theme and your Solution

Hypothesis

Objectives

Create a vision

Outcomes

Impact

### Remaining Pages (more detail)

Overview (2-4 pages)

Background (literature review)

Significance

Preliminary Studies (own work)

Theme and Solution (5-7 pages)

Objectives and Hypotheses

Innovation

Approach and Methods (details)

Potential Pitfalls and Alternative

Approaches

Timeline and Milestones

Outcomes (1-2 pages)

Deliverables

Logic Model

Broader Impacts